

FIG. 3. Diffractometer scans indicating the line-broadening effect discussed in the text. (1) PVF₂ from DMSO; 95-5 blend of PVF₂-PVF; (3) 93-7 copolymer VF₂-TFE. 100 cps; 0.4°/min.

method of calculating amorphous density suggested by Van Krevelen and Hoftyzer [39] gave a value of 1.55 g/cm³ for PVF₂. This value can be compared with an extrapolated value from an earlier paper by Doll and Lando [23] of 1.48 g/cm³. Generally the crystallinities as determined by density measurements are higher than those determined by X-ray diffractometer scans. However, regardless of

which method is used to determine the crystallinity, the samples will maintain their same position on a scale that rates them from highest to lowest crystallinity.

The effect of pressure on the total entropy of melting for all samples that crystallize in phase I is shown in Fig. 4. Figure 5 indicates the same relationship for all samples which crystallize from the melt in phase II. The total change of entropy upon melting is corrected to 100% crystallinity on the basis of the X-ray diffractometer crystallinity measurements. The volume of melting curves and the total entropy of melting curves will have identical shapes since $\Delta P/\Delta T_m$ is a constant for these fluoroolefin samples, and it is assumed that the Clapeyron equation can be applied.

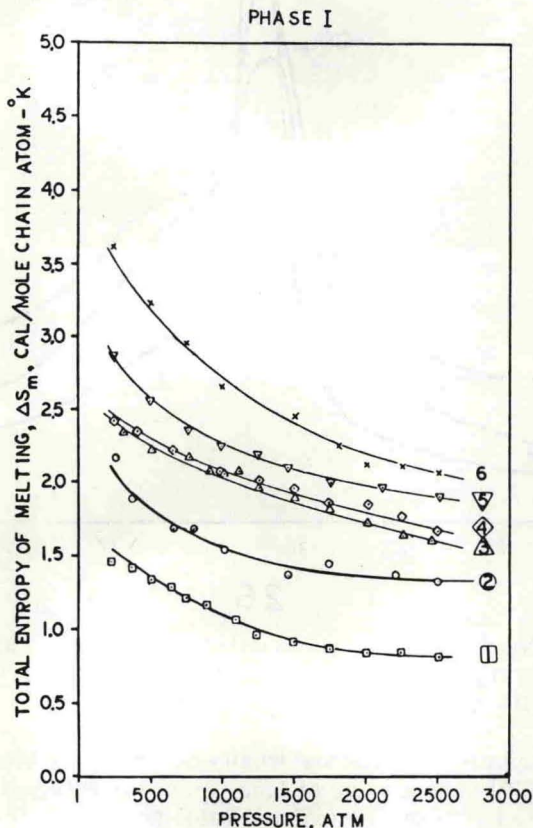


FIG. 4. Effect of pressure on the total entropy of melting for samples that crystallize in phase I. (1) 93-7 Copolymer VF_2 -TFE(LPC); (2) 93-7 copolymer VF_2 -TFE(HPC); (3) 95-5 copolymer VF_2 -VF; (4) 91-9 copolymer VF_2 - VF_3 (HPC); (5) 95-5 blend PVF_2 -PVF; (6) PVF_2 from DMSO.